

(19) World Intellectual Property Organization
International Bureau



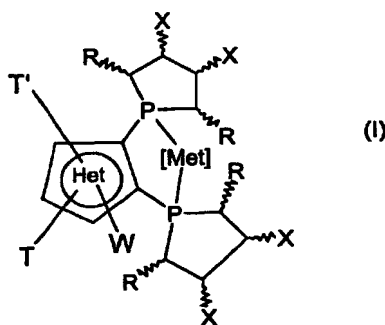
(43) International Publication Date
12 September 2003 (12.09.2003)

PCT

(10) International Publication Number
WO 03/074169 A2

- (51) International Patent Classification⁷: **B01J 23/00**
- (21) International Application Number: PCT/EP03/02160
- (22) International Filing Date: 3 March 2003 (03.03.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
MI2002A000415 1 March 2002 (01.03.2002) IT
- (71) Applicant (for all designated States except US): **CHEMI S.P.A.** [IT/IT]; Via dei Lavoratori, 54, I-20092 Cinisello Balsamo (IT).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **SANNICOLO, Francesco** [IT/IT]; Via Pacini, 39, I-20134 Milano (IT). **PICCOLO, Oreste** [IT/IT]; Via Bornò, 5, I-23896 Sirtori (IT). **BENINCORI, Tiziana** [IT/IT]; Via Pacini, 39, I-20131 Milano (IT). **SADA, Mara** [IT/IT]; Via Diaz, 29, I-20017 Rho (IT). **VERRAZZANI, Alessandra** [IT/IT]; Via C. Morandi, 35, I-56124 Pisa (IT). **TOLLIS, Simona** [IT/IT]; Via E. Zincone, 35, I-03039 Sora (IT). **ULLUCCI, Elio** [IT/IT]; Via Fiuggi, 47, I-04100 Latina (IT). **DE FERRA, Lorenzo** [IT/IT]; Viale delle Province, 6, I-00162 Roma (IT). **RIZZO, Simona** [IT/IT]; Via Gogol, 6, I-San Giuliano Milanese (IT).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:**
— of inventorship (Rule 4.17(iv)) for US only
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METALLIC CATALYSTS FOR CHEMO-, REGIO- AND STEREOSELECTIVE REACTIONS, AND CORRESPONDING PRECURSORS



(57) Abstract: Metallic catalysts of the general formula (I) and their precursors, suitable for chemo- regio- and stereoselective reactions, derived from ortho- bis(1-phospholanyl)-heteroarenes. The new catalysts are characterized by the presence of two homomorphic phospholanic rings set in adjacent positions of an aromatic pentatomic heterocycle.